

YOUR INFRARED EYE FOR SAFETY APPLICATIONS



FLIR A320

The new standard in fix mounted infrared cameras

The infrared eye that never sleeps

Twenty four hours a day, seven days a week and 365 days a year the FLIR A-Series infrared camera gives you complete peace of mind that all is well. It keeps watch on your production site with its infrared eye trained to spot anything that is incorrect. It sees an abnormality before it become a serious, costly and potentially life-threatening failure. And as soon as it does, an built-in alarm is triggered and the camera will even send you an e-mail to alert you to the problem.

Enhance work safety, Avoid break downs, Minimise production loss

We know where the risk areas are in our production process. We also know which assets are the most critical to production continuity. The difficulty is that we never know exactly where or when a problem might occur. And the grey areas don't stop there. It's not always possible to see a problem with the naked eye or to quantify its severity.

The compact A320 from FLIR meets all these needs with ease. This latest generation of fixed thermal cameras can be installed discretely and almost anywhere to monitor your business. It will keep an infrared eye of your production process, safeguard plant and assets and measure temperature differences so that the criticality of the situation may be assessed.

Unsurpassed functionality, Easy integration; Extensive, built-in analysis and alarm functionality

The FLIR A320 infrared camera breaks new ground on many fronts and comes with an impressive array of key features. For example, Power over Ethernet – an industry first – MPEG-4 streamed video, built-in and extensive analysis functionality and automatic messaging via e-mail. With the use of MPEG-4 streamed video this very affordable camera will also allow you to view live images at up to 30Hz with an image resolution of 640 x 480.

Key features

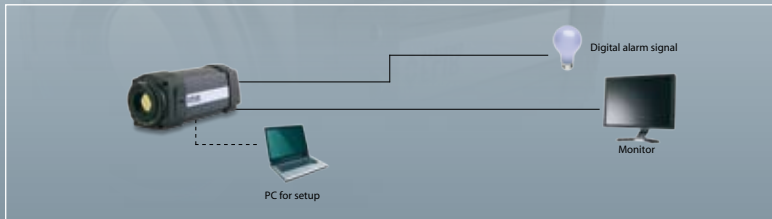
-  **Built-in extensive analyses function**
Spot, area measurement and difference function
-  **Built-in alarm function**
As function of analyses, internal temperature or digital input
-  **PoE (Power over Ethernet)**
Communication and power supplied with only one cable
-  **Messaging functionality**
The camera automatically sends analysis results, IR images and more as an e-mail on schedule or at alarm. Autonomous dispatch of files or e-mails, acting as an FTP- or SMTP-client
-  **Image masking functionality**
Select only the relevant part of the image for your analyses
-  **MPEG-4 streamed video**
MPEG-4 streamed video output over Ethernet to show live images on a PC, 640x480 with overlay at up to 30 Hz
-  **IR monitor software**
In house developed software with support to up to nine cameras simultaneously
-  **Digital inputs/outputs**
For alarms and control of external equipment
-  **16 bit image**
16 bit image transfer to PC for analyses
-  **Remote control**
Remote control of the camera over the Web and TCP/IP protocol
-  **Video output**
Composite Video output, PAL and NTSC compatible
-  **Lens**
Built-in 25 degree lens with both motorized focus and autofocus
-  **High sensitivity < 50 mK**
For clearer images
-  **320x240 pixels**
Excellent image quality
-  **Compact & lightweight design**



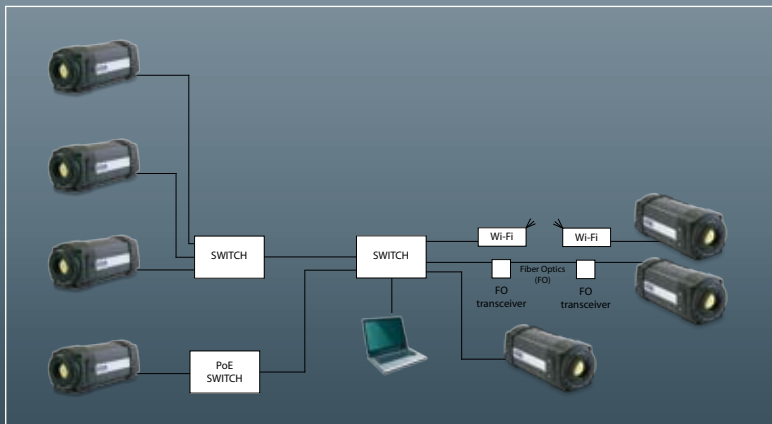
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FLIR A320 - stand alone system



FLIR A320 - multi camera system



Technical specifications

Measurement analysis

Analysis
4 Spotmeters
4 Areas (Box, max/min/average/position)
Isotherm (above, below, interval)
Reference temperature
Temperature Difference (between measurement functions Reference temperature)
Measurement Mask Filter
Schedule response
Measurement corrections

Alarm functions

Response
6 automatic alarms on any selected measurement function, Digital In, Camera temperature function
Digital Out, log, store image, file sending (ftp), email (SMTP), notification

Ethernet

Ethernet, purpose
Ethernet, type
Ethernet, standard
Ethernet, connector type
Ethernet, communication
Ethernet, video streaming
Ethernet, power
Ethernet, image streaming
Ethernet, protocols
Control, result and image
100 Mbps
IEEE 802.3
RJ-45
TCP/IP socket-based FLIR proprietary
MPEG-4, ISO/IEC 14496-1 MPEG-4 ASP@ L5
Power over Ethernet, PoE IEEE 802.3af class 0
16-bit 320 x 240 pixels
- Signal linear
- Temperature linear
- Radiometric
TCP, UDP, SNTP, RTSP, RTP, HTTP, ICMP, IGMP, ftp, SMTP, SMB (CIFS), DHCP, MDNS (Bonjour), uPnP

Digital Input/Output

Digital input
Digital input, purpose
Digital output
Digital output, purpose
Digital I/O, isolation voltage
Digital I/O, supply voltage
Digital I/O, connector type
2 opto-isolated, 10-30 VDC
Image tag (start/stop/general),
Input ext. device (programmatically read)
2 opto-isolated, 10-30 VDC, max 100 mA
As function of alarm,
output to ext. device (programmatically set)
500 VRMS
12/24 VDC, max 200 mA
6-pole jackable screw terminal

Composite video

Video, purpose
Video, connector type
Composite video output, PAL and NTSC compatible
Standard BNC connector

Imaging and optical data

Field of view (FOV)
Close focus limit
Focal length
Spatial resolution (IFOV)
Lens identification
F-number
Thermal sensitivity/NETD
Image frequency
Focus
Electronic zoom
Built-in 25° x 19°
0.4 m (1.31 ft.)
18 mm (0.7 in.)
1.36 mrad
Automatic
1.3
50 mK @ +30 °C (+86 °F)
Up to 30 Hz, image stream and system dependent
Automatic or manual (built in motor)
1-8x continuous, interpolating zooming on images

Detector data

Detector type
Spectral range
Resolution
Detector pitch
Detector time constant
Focal Plane Array (FPA), uncooled microbolometer
7.5-13 µm
320 x 240 pixels
25 µm
Typical 12 ms

Measurement

Object temperature range*
Accuracy
-20 °C to +120 °C (-4 °F to +248 °F)
0 °C to +350 °C (32 °F to +662 °F)
optional 250 °C to +1200 °C (482 °F to 2192 °F)
±2 °C (±3.6 °F) or ±2% of reading

Power system

External power operation
External power, connector type
Voltage
12/24 VDC, 24 W absolute max
2-pole jackable screw terminal
Allowed range 10-30 VDC

Environmental data

Operating temperature range
Storage temperature range
Humidity (operating and storage)
EMC
-15 °C to +50 °C (+5 °F to +122 °F)
-40 °C to +70 °C (-40 °F to +158 °F)
IEC 60068-2-30/24 h 95% relative humidity
+25 °C to +40 °C (+77 °F to +104 °F)
EN 61000-6-2:2001 (Immunity), EN 61000-6-3:2001 (Emission), FCC 47 CFR Part 15 Class B (Emission)

Encapsulation

Bump
Vibration
IP 40 (IEC 60529)
25 g (IEC 60068-2-29)
2 g (IEC 60068-2-6)

Physical data

Weight
Camera size (L x W x H)
Tripod mounting
Base mounting
Housing material
0.7 kg (1.54 lb.)
170 x 70 x 70 mm (6.7 x 2.8 x 2.8 in.)
UNC 1/4"-20 (on three sides)
2 x M4 thread mounting holes (on three sides)
Aluminium

Package content

The A320 camera in a card board box
Built in fixed 25 degree lens with motor focus
Power supply, 110 – 220 V AC
Pig tail power cable
Ethernet cable CAT-6
Quick installation/reference guide
CD with manuals
CD with drivers and utility software including, IP Configuration Utility, IR Monitor, AXXX Control & Image Interface

Optional lenses

Tele lens 6° x 4,5°, close focus 4 m
Tele lens 15° x 11°, close focus 1,2 m
Wide angle lens 45° x 34°, close focus 0.2 m
Wide angle lens 90° x 73°, close focus 0.02 m
Close up lens 100 µm, working dist. 73 mm
Close up lens 50 µm, working dist. 37 mm
Close up lens 25 µm, working dist. 18,2 mm

Optional accessories

Hard carry case
Environmental enclosures
(www.videotec.com)

Compatible software

FLIR QuickPlot
FLIR ResearchIR
FLIR Researcher Professional 2.9
FLIR SDK
FLIR LabVIEW Toolkit

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*Optional object temp. ranges are sold as add-ons.
Call your local FLIR sales office for more information.